

Sparks Companies, Inc.

*Effects of Transportation on
Competitiveness of US
Agriculture*

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USDA Agricultural Outlook Forum

February 20, 2003

Can We Compete For Growing World Markets?

- Competitiveness is:
 - Ability to produce profitably for prices expected
 - Returns must cover variable costs
 - And, some part of fixed cost over longer-term
 - Ag investment competes with other capital uses
 - So, returns relative to investment requirements is important
 - Often small return on small investment
 - May be more attractive than larger return on large investment
 - Ag investment competition is crop/use specific
 - Investment opportunities in each crop compete
 - Corn vs soybeans vs cotton vs wheat, etc.
 - Idling land is competing use—value from intrinsic beauty, etc.

Two Primary Questions:

1) What level of resources are attracted by market mix?

- How much land, capital, labor, etc.
- Do expectations stimulate development of additional land?

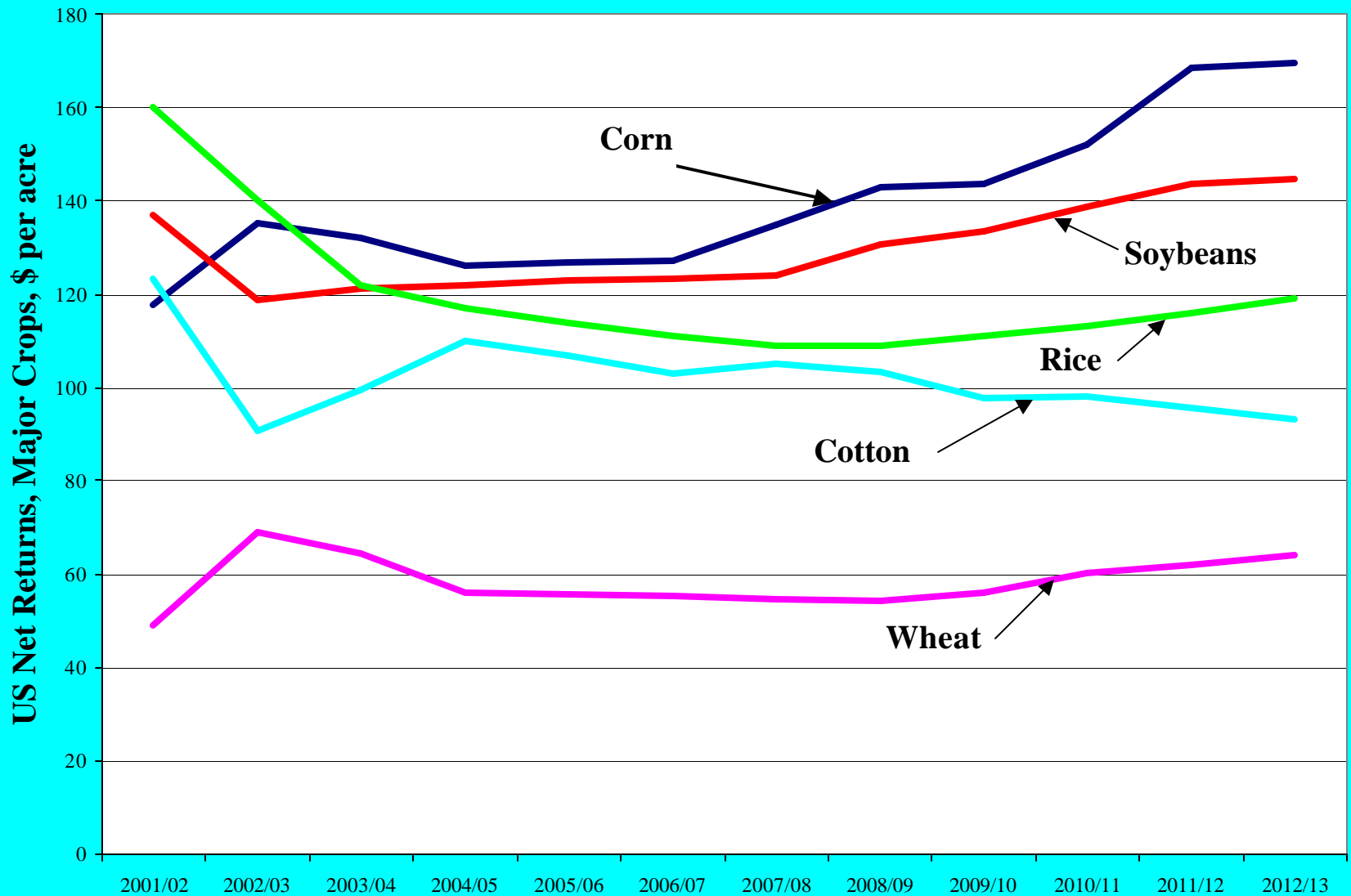
2) How are/will resources allocated among crops?

- Relative returns to land/management is driver
 - Highest expected returns stimulate investment/production/exports
- Land allocation is key
 - Largely determines production
 - Production intensity varies little in response to economics
- What affects relative returns?

What Affects Returns?

- Physical productivity
 - Yields; quality of land; amount, reliability of rainfall
 - Production technology; genetics; capital equipment; management
- World & domestic supply/demand
 - Key differences among crops drive returns
- External Factors
 - Infrastructure and cost of transportation & handling
 - Transport costs come off the bottom line
 - Market access/duties
 - Regional/bilateral agreements shift competitive position
 - Exchange rates (producers outside US)
 - Exports sales are in \$US
 - Government support
- Note: Land costs not mentioned
 - Reflect – not determine returns

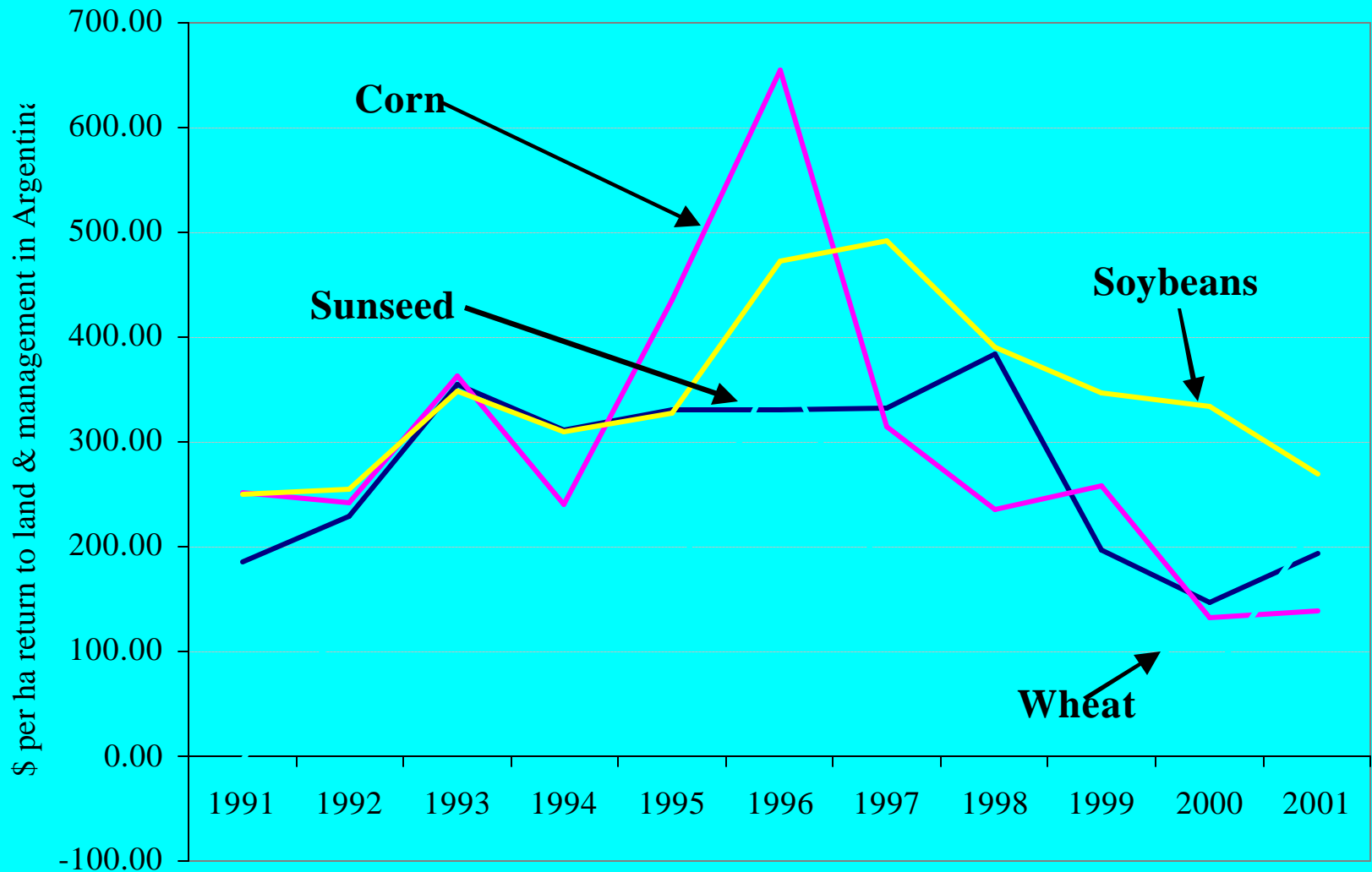
US Crop Returns, USDA Baseline



Soybean Export Market Indicative Returns, 2000

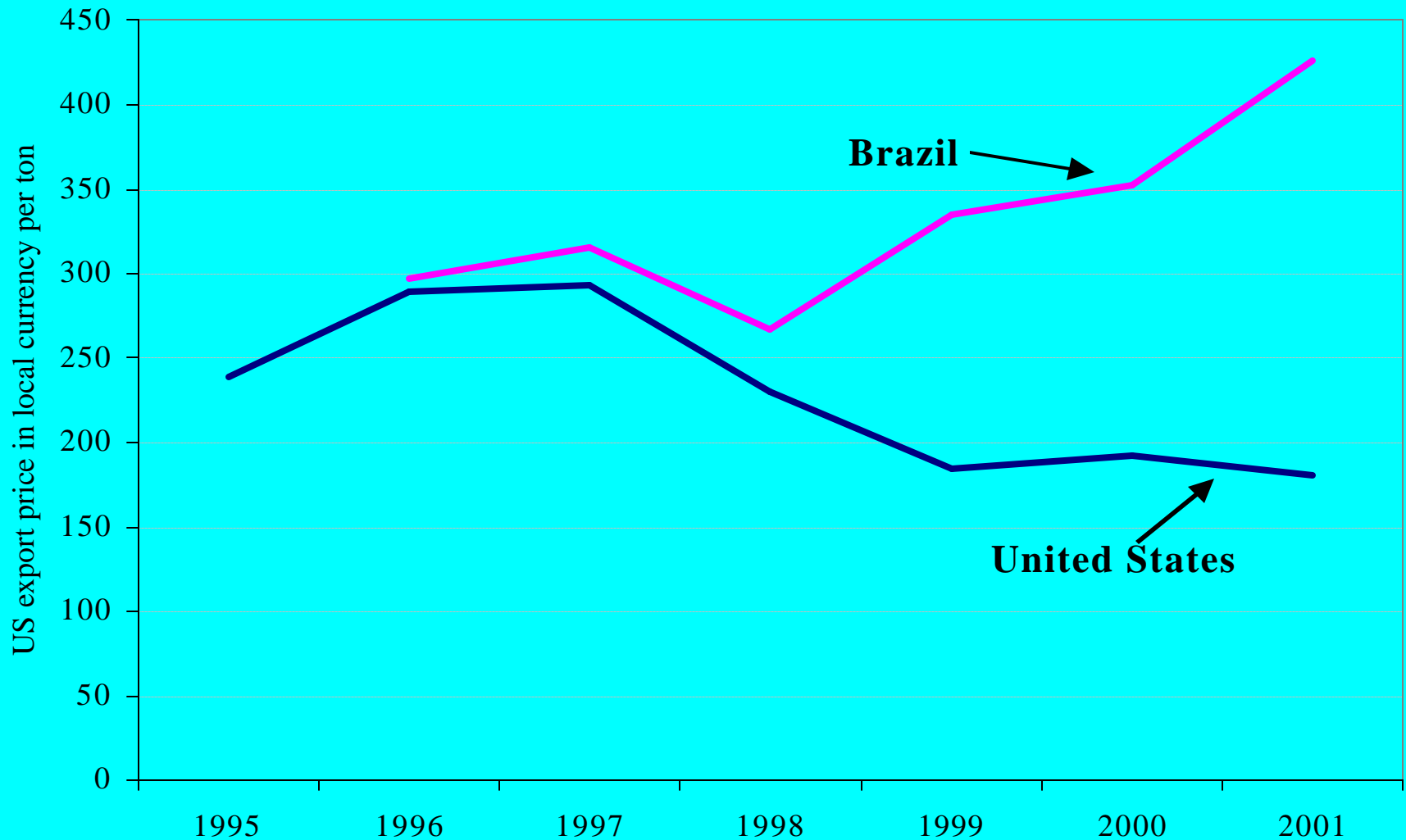
	Argentina	Brazil		United States
	<i>Santa Fe</i>	<i>Parana</i>	<i>MG</i>	<i>Heartland</i>
Price at Rotterdam (\$/bu)	\$5.95			
Ocean Freight (\$/bu)	0.49	0.57	0.57	0.38
Internal Handling/Transport	0.81	0.85	1.34	0.43
Variable Cost of Production	1.90	2.78	3.17	2.15
Net Return to Land & Management	2.75	1.75	0.87	2.99
Efficiency Index				
Ocean Freight (\$/bu)	8	10	10	6
Internal Handling/Transport	14	14	23	7
Variable Cost of Production	32	47	53	36
Net Return to Land & Management	46	29	15	50

Argentine Net Returns to Land & Management



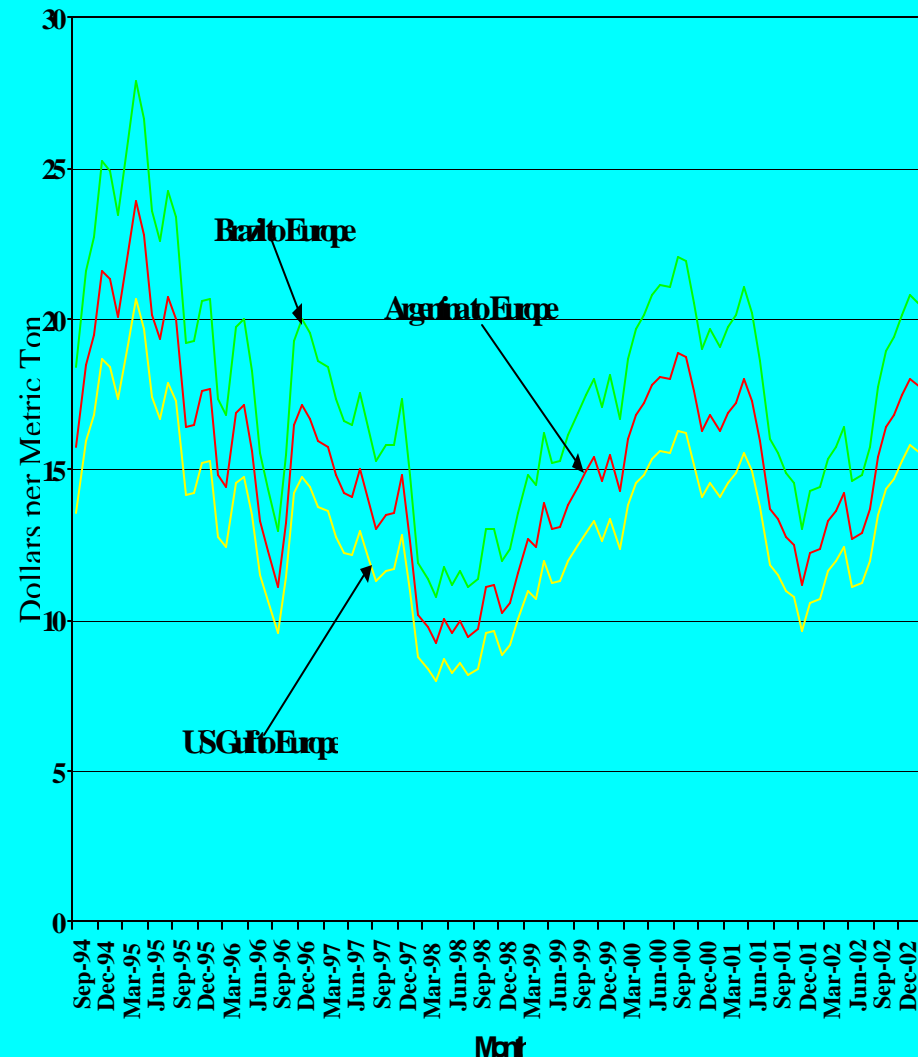
Exchange Rates—Soybean Example

Price in Local Currencies, US & Brazil

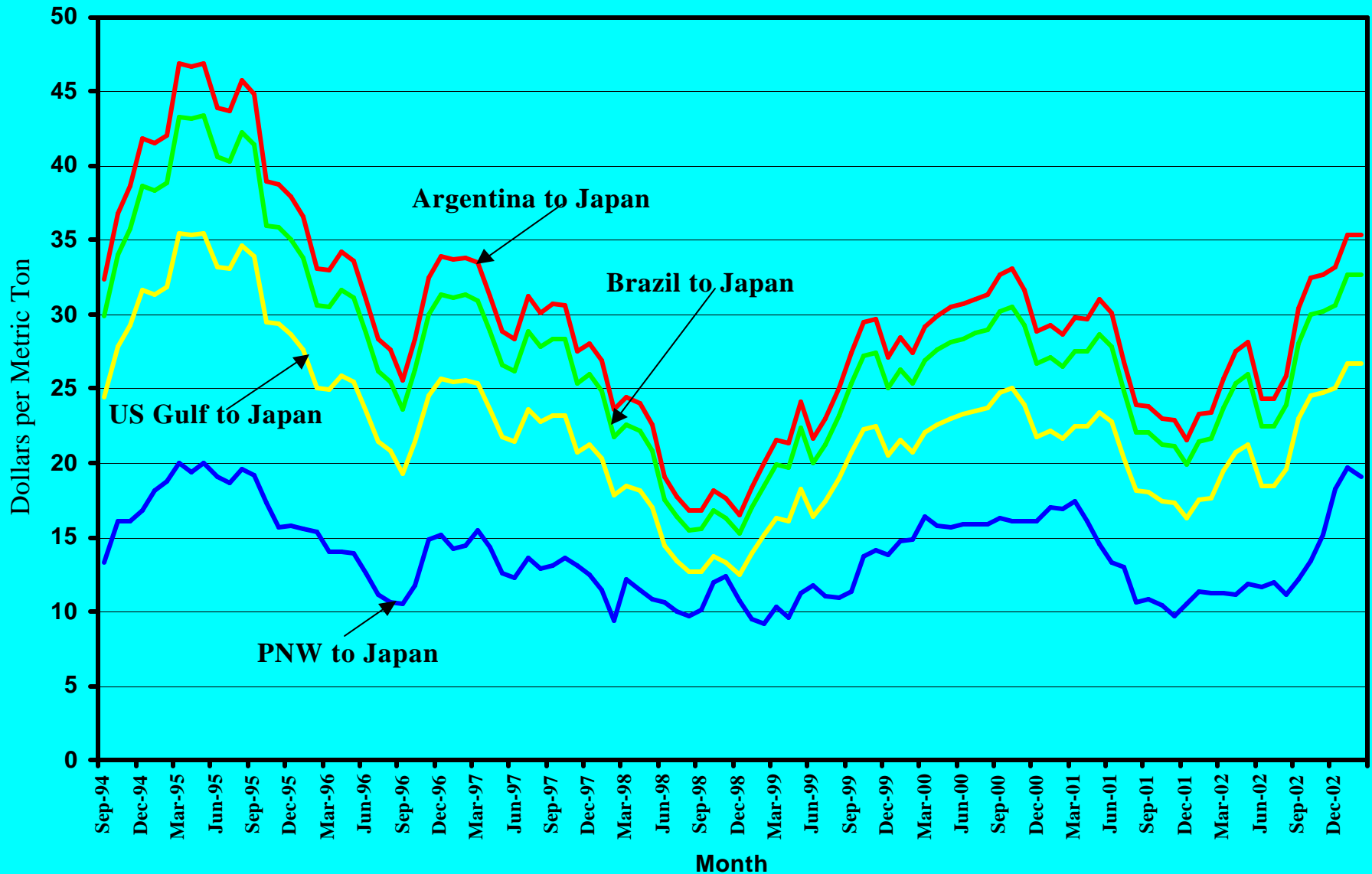


Ocean Rate Structure—to Europe

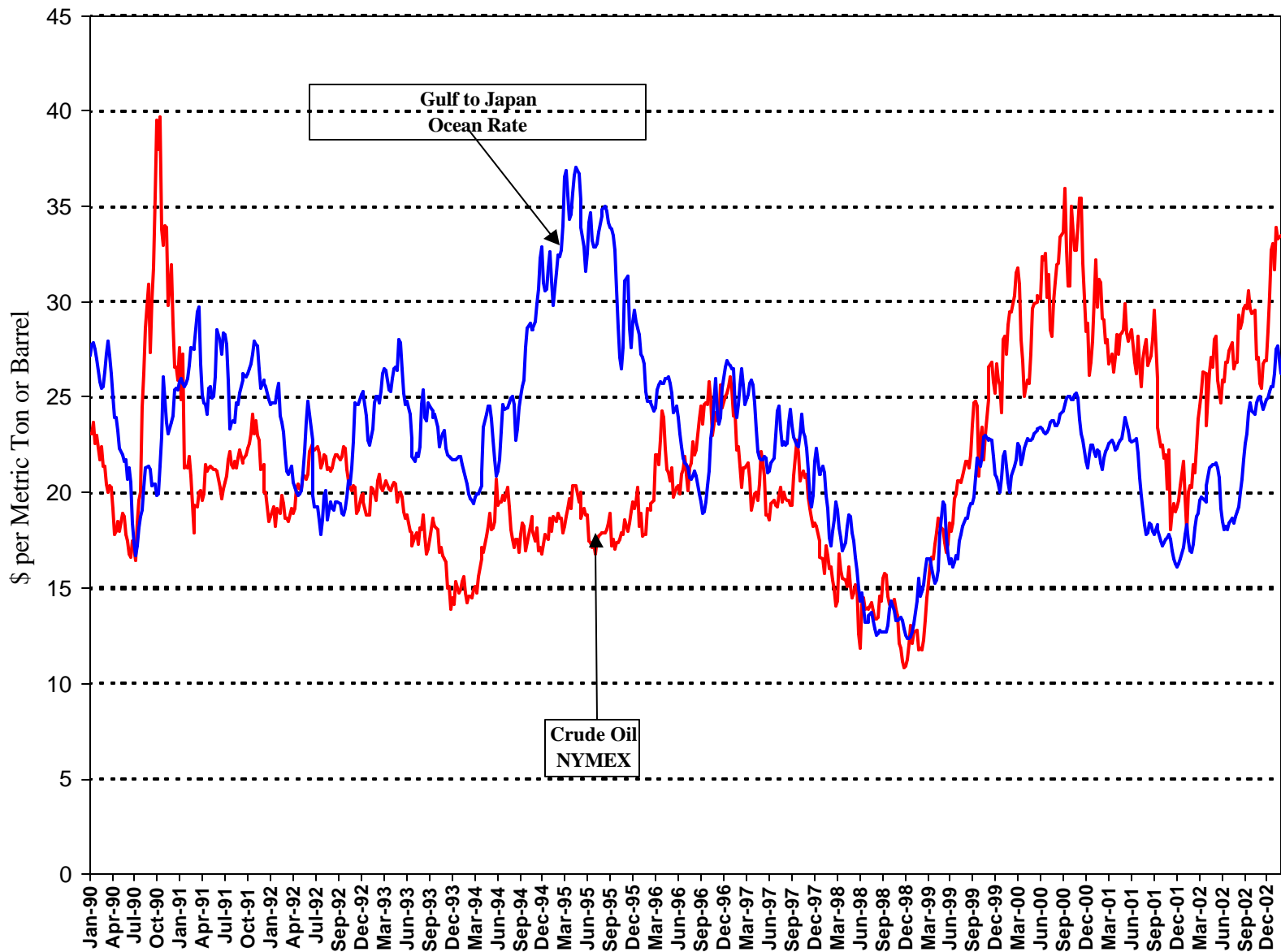
- Determined by distance
 - US simply closer
 - Gulf to Europe 4,829 mi
 - Brazil to Europe 5,471 mi
 - Arg to Europe 6,373 mi
- Reflects competition
 - Grains/oilseeds about 15%
 - Competition with:
 - Oil
 - Coal
 - Iron ore
 - Other
- Recent trend is higher



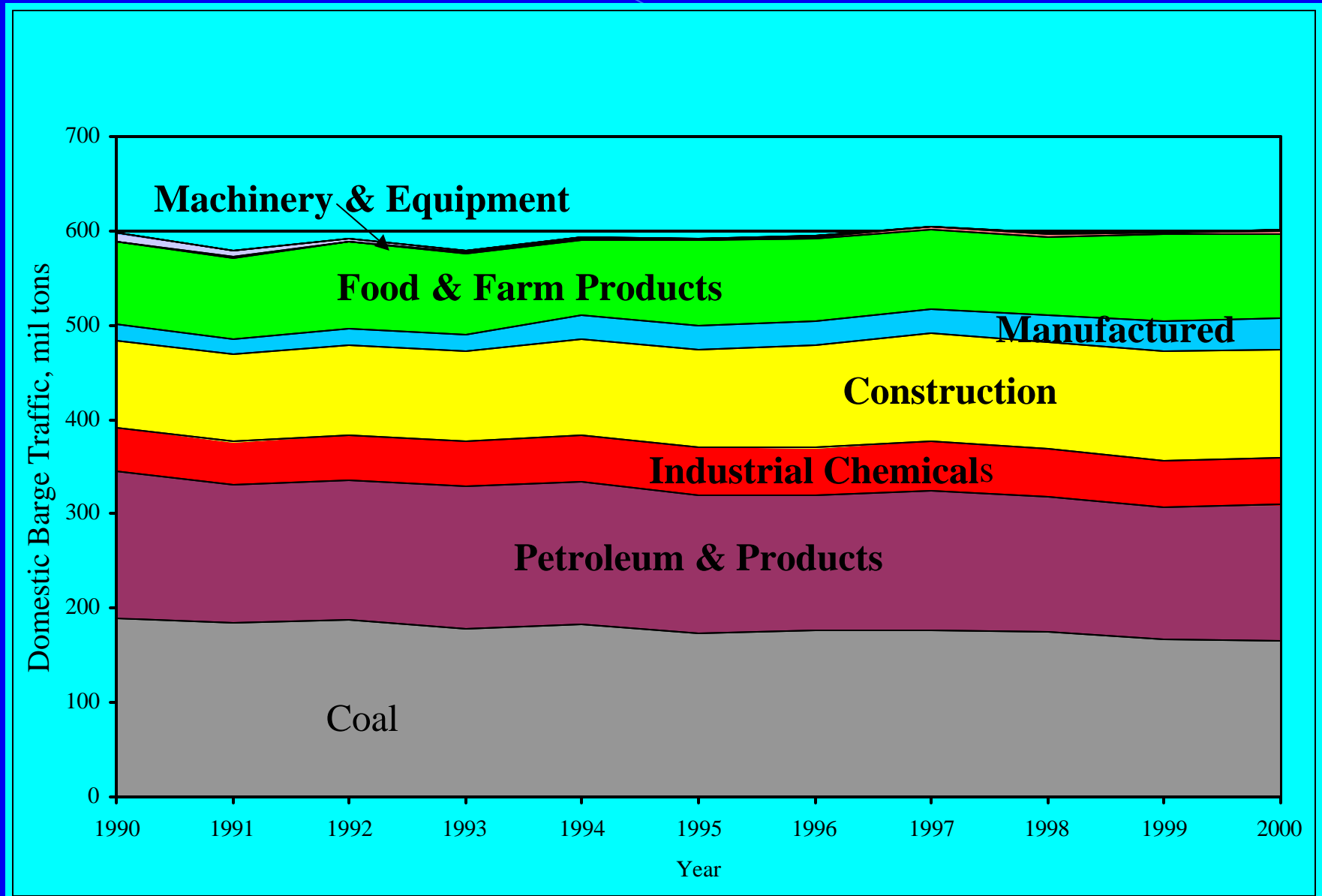
PNW Has Major Location Advantage



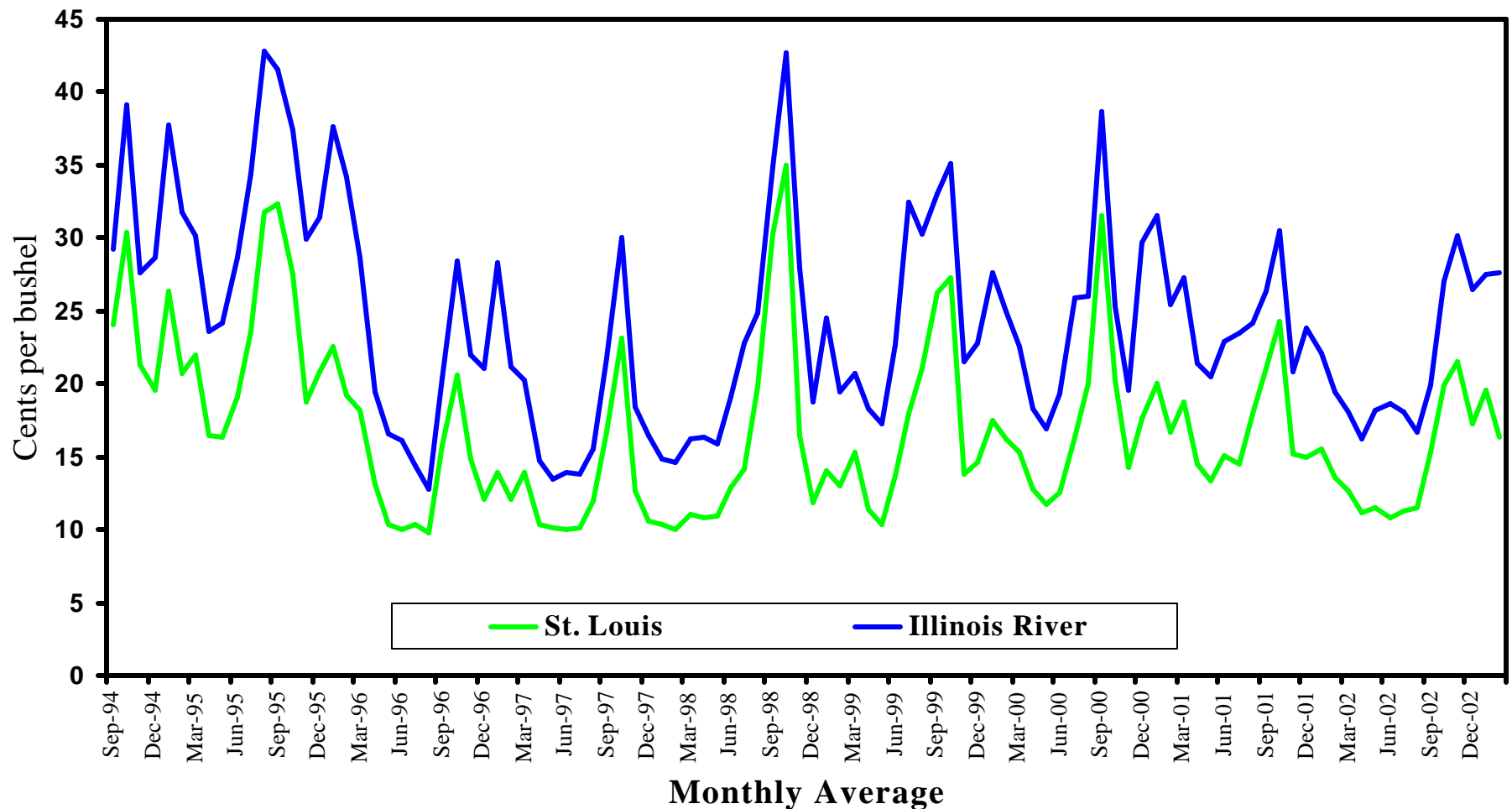
Fuel Cost Impacts



Domestic Barge Traffic Composition



River Rates Reflect Competition, Costs



US Crops Losing Competitiveness?

- Declining North American share no threat by itself
 - All available land resources now in use at profitable returns
 - More factors affect US markets than for competitors
 - Ethanol production boosts corn market competition
 - Processors competing more advantageously for product
 - More high-valued exports
 - Land, other factor prices strong/rising
 - Even without government support
- But, could reflect declining US participation if:
 - Net returns favor non-export crops
 - Infrastructure declines increase export costs
 - Currency shifts continue to favor competitors
 - Government programs favor other crops, or idle land

Observations

- Trade importance not adequately understood
 - Export sales more than twice government support
 - Export taxes – tariffs on US goods now \$20 bil annually
- Any potential decline in trade is immediate threat to \$1.8 trillion structure
 - E.g., \$15 bil trade decline over five years could diminish sector assets by at least \$200 bil
 - Transport access & costs especially important
 - Major impact on “bottom line”
 - Affect net returns
 - Affect competition for resources

Expectations for Competitiveness

- Land availability drives SA competitiveness
 - Feasible to develop resources in response to
 - Relatively high returns (stimulated by weak currency)
 - Technology growth
 - Lower North American variable costs are large advantage
 - Corn, soybean productivity major competitiveness driver
- World market structure very important
 - E.g., China likely will continue to attempt to boost soybeans
 - US better equipped to sell high-transport using crops
 - More than 3 times the tonnage of corn per acre, vs soy, wheat
 - More efficient US transportation system protects that efficiency
- What other competitive factors?
 - Capital availability in LA—Cost of developing land
 - Continued currency advantage?
 - Continued investment in US transportation system
 - Could weaken US technology advantage
 - Big unknown—LA domestic livestock, feed demand

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Sparks: Who We Are

- Food and Agriculture Consulting Firm
 - 125 people
 - Offices
 - Memphis, Washington, Winnipeg, Beijing, Buenos Aires
- Provide—
 - Price risk management to >400 commercial clients
 - General consulting services
 - Including development activities for USAID, World Bank
 - Publish more than a dozen periodic reports/newsletters
 - Range
 - Commodities
 - Transportation
 - Weather
 - Energy
 - Agricultural policy
 - Training
 - Ag managers
 - Merchandisers, etc